at least one MHC-binding epitope of Tek, which isolated peptide fragment can stimulate an immune response.

43. An isolated peptide fragment according to claim 42 comprising a single MHC-binding epitope of Tek protein.

44. An isolated peptide fragment according to claim 42 comprising two or more MHC-binding epitopes of Tek protein.

45. An isolated peptide fragment according to claim 44 wherein the amino acid sequence is such that the said two or more epitopes are contiguous or substantially contiguous.

46. An isolated peptide fragment according to claim 44 wherein the amino acid sequence is substantially free of the amino acid sequence that occurs between neighbouring epitopes in the native full-length Tek protein.

47. An isolated peptide fragment according to claim 42 wherein said at least one MHC-binding epitope comprises an amino acid sequence which appears within an amino acid sequence region selected from TEK1 (amino acids 55 to 90), TEK2 (amino acids 163 to 176), TEK3 (amino acids 345 to 362), TEK4 (amino acids 427 to 442) and/or TEK5 (amino acids 530 to 542) of the Tek polypeptide as shown in Fig. 1, or a corresponding region in a variant form of Tek, which is functionally homologous to the region shown in Fig. 1.

48. An isolated peptide fragment according to claim 47, wherein said at least one MHC-binding epitope comprises an amino acid sequence having greater than 70% amino acid sequence identity with the amino acid sequence region selected from TEK1, TEK2, TEK3, TEK4 and/or TEK5 of the Tek polypeptide as shown in Figure 1.

Cl 1 cont

49. An isolated peptide fragment according to claim 42 which comprises one or more of the epitope sequences Z1, Z2, Z3, Z5, Z6, Z7, Z8, Z9, Z11, Z12 and Z32 as set forth in Tables 1 and 4, and, optionally, at least one of a variant form of said Z epitope sequences which is functionally homologous to a sequence shown in Tables 1 or 4.

50. An isolated peptide fragment according to claim 42 which binds HLA-A2 with a stabilisation ratio of 1.3 or greater.

51. An isolated peptide fragment according to claim 50 which can stimulate T cell proliferation.

52. An isolated peptide fragment according to claim 50 which binds HLA-A2 with a stabilisation ratio of 1.5 or greater.

53. An isolated peptide fragment according to claim 50 which binds HLA-A2 with a stabilisation ratio of 2.3.

54. A polypeptide which comprises a peptide fragment according to claim 42 and at least one amino acid sequence not characteristic of Tek protein.

55. A polypeptide according to claim 54 which is a fusion protein.

C1 cont

56. An antibody capable of specifically binding to a peptide fragment of claim 42.

57. An antibody according to claim 56 which is capable of reacting with wild-type Tek polypeptide.

58. An antibody according to claim 56 which is a monoclonal antibody.

59. A fragment, derivative, functional equivalent or homologue of an antibody according to claim 56 which retains the epitope-specific binding activity of said antibody.

60. A fragment according to claim 59 which comprises an Fab fragment consisting of VL, VH, C1 and CH1 domains; an Fd fragment consisting of VH and CH1 domains; an Fv fragment consisting of VL and VH domains of a single arm of an antibody; a dAb fragment which consists of a VH domain; an isolated CDR region or $F(ab')_2$ fragment; or a single chain Fv fragment.

61. A cell culture capable of producing an antibody, fragment, derivative, functional equivalent or homologue according to claim 56.

62. A cell culture according to claim 61 wherein the cells are hybridomas.

63. A nucleic acid sequence which codes for an antibody, fragment, derivative, functional equivalent or homologue according to claim 56.

64. A recombinant DNA construct or virus vector which comprises a nucleic acid sequence encoding a peptide fragment according to claim 42.

65. A recombinant DNA construct or virus vector according to claim 64 which has one or more regulatory sequences for controlling the expression of said peptide fragment.

66. A recombinant DNA construct according to claim 64 which is a plasmid.

67. A host cell containing and capable of expressing a nucleic acid encoding a peptide fragment according to claim 42.

68. A method of producing an antibody, fragment, derivative, functional equivalent or homologue according to claim 56, including the step of growing a cell capable of producing

the antibody under conditions in which the antibody is produced.

69. A pharmaceutical composition for use as a vaccine to target endothelial cells lining the blood vessels of a tumour, said composition comprising a peptide fragment according to claim 42.

70. A method of preparing a pharmaceutical composition according to claim 69, said method including the step of combining said peptide fragment, with a pharmaceutically acceptable excipient, carrier, buffer or stabiliser.

71. An isolated nucleic acid molecule encoding a peptide fragment of claim 42.

72. A method of obtaining a nucleic acid molecule encoding a peptide fragment of claim 42, the method including hybridising a probe having a sequence encoding a peptide fragment of Tek regions TEK1 to 5 or a peptide fragment as identified in Tables 1 and 4, or a complementary sequence thereof, to target nucleic acid.

73. A method according to claim 72 including the step of amplifying said target nucleic acid by PCR methods.

74. A method of producing a peptide fragment according to claim 42 which includes the step of expressing a nucleic acid molecule of claim 71 in an expression system.

75. A vector comprising a nucleic acid molecule of claim 71.

76. A host cell containing a vector according to claim 75.

77. A method of therapeutic or prophylactic treatment of a patient, comprising administering an effective amount of a pharmaceutical composition of claim 69.

78. A method according to claim 77 comprising inoculating said patient at least three times with said pharmaceutical composition, the second inoculation being administered more than two weeks after the first inoculation.

79. A method of therapeutic or prophylactic treatment of a patient, which comprises introducing a sequence encoding a peptide fragment according to claim 42, into target host cells of the patient.

80. An isolated peptide fragment according to claim 42, comprising one or more of the epitope sequences Z1, Z2, Z3, Z5, Z6, Z7, Z8, Z9, Z11, Z12 and Z32, as set forth in Tables 1 and 4, and at least one of a variant form of said Z epitope sequences which is functionally homologous to a sequence shown in Tables 1 or 4.

81. An antibody capable of specifically binding to a peptide fragment of claim 54.

82. An antibody according to claim 81 which is capable of reacting with wild-type Tek polypeptide.

83. An antibody according to claim 57 which is a monoclonal antibody.

84. An antibody according to claim 82 which is a monoclonal antibody.

85. A recombinant DNA construct or virus vector which comprises a nucleic acid sequence encoding a polypeptide according to claim 54.

86. A host cell containing and capable of expressing a nucleic acid encoding a polypeptide according to claim 54.

87. A pharmaceutical composition for use as a vaccine to target endothelial cells lining the blood vessels of a tumour, said composition comprising a polypeptide according to claim 54.

88. A pharmaceutical composition for use as a vaccine to target endothelial cells lining the blood vessels of a tumour, said composition comprising a recombinant DNA construct or virus vector according to claim 64.

89. A method of preparing a pharmaceutical composition according to claim 87, said method including the step of combining said polypeptide with a pharmaceutically acceptable excipient, carrier, buffer or stabiliser.

90. A method of preparing a pharmaceutical composition according to claim 88, said method including the step of combining said recombinant DNA construct or virus vector with a pharmaceutically acceptable excipient, carrier, buffer or stabiliser.

91. An isolated nucleic acid molecule encoding a polypeptide according to claim 54.

92. A method of producing a polypeptide according to claim 54 which includes the step of expressing a nucleic acid molecule of claim 91 in an expression system.

93. A vector comprising a nucleic acid molecule of claim 91.

94. A host cell containing a vector according to claim 93.

95. A host cell containing a construct or virus vector according to claim 64.

96. A host cell containing a construct or virus vector according to claim 85.

97. A method of therapeutic or prophylactic treatment of a patient, comprising administering an effective amount of a pharmaceutical composition of claim 87.

98. A method of therapeutic or prophylactic treatment of a patient, comprising administering an effective amount of a pharmaceutical composition of claim 88.

99. A method according to claim 97, comprising inoculating said patient at least three times with said pharmaceutical composition, the second inoculation being administered more than two weeks after the first inoculation.

100. A method according to claim 98, comprising inoculating said patient at least three times with said pharmaceutical composition, the second inoculation being administered more than two weeks after the first inoculation.

101. A method of therapeutic or prophylactic treatment of a patient, which comprises introducing a sequence encoding a polypeptide according to claim 54, into target host cells of the patient.

Please cancel claims 1-41.

The purpose of this Preliminary Amendment is to delete multiple claims dependencies and to eliminate clams and claim terms that do not appear to conform with current United States

Patent and Trademark Office practice.

The foregoing amendments do not introduce new matter into the present application, and, therefore should be entered without objection.

Early and favorable action on the present application is respectfully requested.

Respectfully submitted,

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